Contents

Part I Mobile Environments

1 “Life on-the-Go”: The Role of Speech Technology in Mobile Applications ................................................................. 3
William Meisel

2 “Striking a Healthy Balance”: Speech Technology in the Mobile Ecosystem .............................................................. 19
Scott Taylor

3 “Why Tap When You Can Talk?”: Designing Multimodal Interfaces for Mobile Devices that Are Effective, Adaptive and Satisfying to the User ................................................................. 31
Mike Phillips, John Nguyen, and Ali Mischke

4 “Your Word is my Command”: Google Search by Voice: A Case Study ........................................................................ 61
Johan Schalkwyk, Doug Beeferman, Françoise Beaufays, Bill Byrne, Ciprian Chelba, Mike Cohen, Maryam Kamvar, and Brian Strope

5 “Well Adjusted”: Using Robust and Flexible Speech Recognition Capabilities in Clean to Noisy Mobile Environments .................................................................................................................. 91
Sid-Ahmed Selouani

Part II Call Centers

6 “It’s the Best of All Possible Worlds”: Leveraging Multimodality to Improve Call Center Productivity ................................. 115
Matthew Yuschik
7 “How am I Doing?”: A New Framework to Effectively Measure the Performance of Automated Customer Care Contact Centers........................................................................................................ 155
David Suendermann, Jackson Liscombe, Roberto Pieraccini, and Keelan Evanini

8 “Great Expectations”: Making use of Callers’ Experiences from Everyday Life to Design a Satisfying Speech-only Interface for the Call Center.......................................................................................... 181
Stephen Springer

9 “For Heaven’s Sake, Gimme a Live Person!” Designing Emotion-Detection Customer Care Voice Applications in Automated Call Centers........................................................................................................ 191
Alexander Schmitt, Roberto Pieraccini, and Tim Polzehl

10 “The Truth is Out There”: Using Advanced Speech Analytics to Learn Why Customers Call Help-line Desks and How Effectively They Are Being Served by the Call Center Agent .................................................. 221
Marsal Gavalda and Jeff Schlueter

Part III Clinics

11 Dr. “Multi-Task”: Using Speech to Build Up Electronic Medical Records While Caring for Patients.......................................................... 247
John Shagoury

12 “Hands Free”: Adapting the Task–Technology-Fit Model and Smart Data to Validate End-User Acceptance of the Voice Activated Medical Tracking Application (VAMTA) in the United States Military.......................................................... 275
James A. Rodger and James A. George

13 “You’re as Sick as You Sound”: Using Computational Approaches for Modeling Speaker State to Gauge Illness and Recovery......................................................................................................................... 305
Julia Hirschberg, Anna Hjalmarsson, and Noémie Elhadad

14 “Cry Baby”: Using Spectrographic Analysis to Assess Neonatal Health Status from an Infant’s Cry................................................................. 323
Hemant A. Patil

Epilog.......................................................................................................................... 349

About the Author..................................................................................................... 359

Index......................................................................................................................... 361
Advances in Speech Recognition
Mobile Environments, Call Centers and Clinics
Neustein, A. (Ed.)
2010, XXVI, 369 p., Hardcover
ISBN: 978-1-4419-5950-8